

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 05-250881

(43)Date of publication of application : 28.09.1993

(51)Int.Cl. G11C 16/02
G11C 14/00

(21)Application number : 04-045790

(71)Applicant : ROHM CO LTD

(22)Date of filing : 03.03.1992

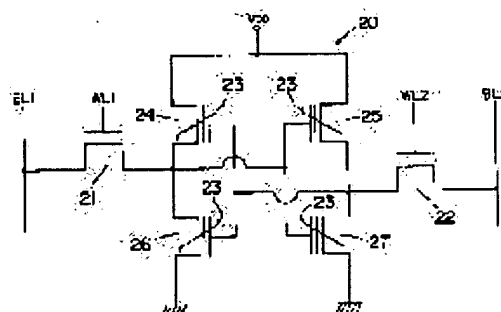
(72)Inventor : TAKASU HIDESHI

(54) NONVOLATILE STORAGE ELEMENT

(57)Abstract:

PURPOSE: To remarkably reduce the area of a memory cell and to read nondestructively by providing a ferroelectric substance film accumulating electric charge in four field-effect transistors of a flip-flop circuit storing information.

CONSTITUTION: The flip-flop circuit 20 is constituted of four MFSFETs 24, 25, 26, 27 having a ferroelectric substance gate film 23 and a pair of FETs 21, 22 for write and read are connected to the flip-flop circuit 20 respectively. Then, a control circuit controlling connection between usual flip-flop circuit and a ferroelectric substance capacitor is unnecessary and then the area of the memory cell is reduced remarkably. Further, since a channel forming state is held with the residual polarization of the ferroelectric substance film 23 by the MFSFETs 24, 25, 26, 27, a state immediately before power source is turned off is held by the flip-flop circuit 20 even when power source is turned off and nondestructive reading is performed.



LEGAL STATUS

[Date of request for examination] 03.03.1999

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number] 3270765

[Date of registration] 18.01.2002

[Number of appeal against examiner's decision of rejection]